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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,426	08/15/2001	Ramesh Raskar	CR-1348	1543

7590 10/07/2003

Patent Department
Mitsubishi Electric Research Laboratories, Inc.
201 Broadway
Cambridge, MA 02139

EXAMINER	
WALLACE, SCOTT A	

ART UNIT	PAPER NUMBER
2671	3

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/930,426	RASKAR, RAMESH	
	Examiner	Art Unit	
	Scott Wallace	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-2 and 4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4-5 of U.S. Patent No. 09/930,322. Although the conflicting claims are not identical, they are not patentably distinct from each other because 09/930,322 does not segment the 3D model into parts and edit the parts. It would have been obvious to one of ordinary skill in the art because the 09/930,322 discloses editing the 3D model to reflect a desired appearance and to get animation different parts of the object have to be edited separately to move differently to provide animation.

2. As per claim 2, this is the same as 09/930,322 claim 5.

3. As per claim 4, this is the same as 09/930,322 claim 1.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stegmann et al., U.S. Patent No. 6,415,050 in view of LaChapelle, U.S. Patent No. 6,163,322.

3. As per claim 1, Stegmann et al discloses a method for simulating motion of a static 3D physical object in a static scene, comprising: acquiring a 3D graphics model of the 3D physical object and the scene (column 1 lines 5-10, 15-25, 58-63); registering a projector with the 3D physical object, the scene and the 3D graphics model (column 1 lines 5-10); illuminating the 3D physical object and the scene with the animation video to give the 3D physical object and the scene the desired appearance and virtual motion (column 1 lines 58-63). However, Stegmann et al does not disclose segmenting the 3D graphics model into a plurality of parts; editing each of the parts with graphics authoring tools to reflect a desired appearance and virtual motion of each part; rendering the edited parts in real-time as an animation video. This is disclosed in LaChapelle in column 7 lines 5-67 and column 8 lines 1-5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use animate different parts of the model because this would result in a more realistic animation sequence.

4. As per claim 7, LaChapelle discloses enforcing a consistent relationship between motion of different parts (column 7 lines 5-67 and column 8 lines 1-5,if it wasn't consistent then the animation wouldn't look real).

5. Claims 2, 4 AND 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stegmann et al in view of LaChapelle in view of Reinhardt et al., U.S. Patent No. 6,281,904.

6. As per claim 2, Stegmann and LaChapelle do not disclose editing view-independent texture and view-dependent material characteristics of the 3D graphics model to reflect the desired appearance. This is disclosed in Reinhardt et al in column 12 lines 34-44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to edit textures because this would eliminate artifacts from specular lighting.

7. As per claim 4, Reinhardt et al discloses wherein the rendering the parts considers a user location and a location of a virtual light (column 12 lines 34-44).

8. As per claim 6, Reinhardt et al discloses adding reflections and global visual effects (column 12 lines 34-44, the lighting would add reflections).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stegmann et al. in view of LaChapelle in further in view of Sakaguchi, U.S. Patent No. 6,310,627.

10. As per claim 3, Stegamnn and LaChapelle do not disclose editing, for each of the parts, independent rotation and translation parameters to ascribe different virtual motions to the plurality of parts. This is disclosed in Sakaguchi in column 31 lines 34-47. It would have been obvious to one of ordinary skill in the art at the time the invention was made to rotate and translate the parts separately because this would create a more realistic animation sequence.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stegmann et al. in view of LaChapelle in further in view of Cohen, U.S. Patent No. 5,831,627.

12. As per claim 5, Stegmann and LaChapelle do not disclose adding motion blur and moving shadows. This is disclosed in Cohen in the abstract and column 2 lines 60-65. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use motion blur and moving shadows because this would improve the appearance of the moving objects (column 1 lines 5-11).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Scott Wallace** whose telephone number is **703-605-5163**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at 703-305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600